Chapter 2. Planning Framework



Chapter 2. Planning Framework



This chapter describes the framework for management planning for the Reserve. The major elements of this framework, addressed in separate sections in this chapter, include

- existing direction for land-use planning and management (including existing requirements and guidelines for land-use planning and management, which provide the framework and point of departure for management direction articulated in Chapterss 4 and 5 of this plan);
- planning issues identified during the scoping process; and
- planning criteria (which include extent of analyses required, appropriate range of alternatives, and underlying assumptions needed for successful development of the management plan).

Existing Direction for Land-Use Planning and Management

This section describes existing public policy direction affecting management options and planning processes for the Reserve, as prescribed in current laws, regulations, interagency agreements, manuals and handbooks, and existing approved plans. Applicable direction includes both legal requirements and management guidelines. Legal requirements include federal–state agreements and federal and state laws and regulations adopted pursuant to those laws. Management guidelines, which are useful but are not obligatory, are derived from related resource management plans.

Legal Requirements

Reserve Legislation

In legislation authorizing the purchase of the Headwaters Forest, Congress directed the Secretary of the Interior to prepare a long-term plan for its management in consultation with the State of California (1998 Interior Appropriations Bill). Congress established the following management goal for this plan:

"conserve and study the land, fish, wildlife, and forests occurring on such land, while providing public recreation opportunities and other management needs."

Additionally, Congress directed that the plan

shall guide general management of the Headwaters Forest and address the following management issues:

- scientific research on forests, fish, wildlife, and other such activities that shall be fostered and permitted on the Headwaters Forest;
- providing recreation opportunities on the Headwaters Forest;
- access to the Headwaters Forest:
- construction of minimal necessary facilities within the Headwaters Forest so as to maintain the ecological integrity of the Headwaters Forest;
- other management needs;
- an annual budget for management of the Headwaters Forest, which shall include a projected revenue schedule (such as fees for research and recreation) and projected expenses.

This legislative direction mandates a hierarchy of priorities in land management, in which resource conservation, maintenance of ecological integrity, and research are the primary purposes of creating the Reserve. Recreation, facilities development, and management needs must be subordinate to this primary purpose.

The legislation established the boundary of the Reserve and an access point at the northern end. A right-of-access to the southern portion of the Reserve was negotiated before the acquisition transaction was closed. That access was secured by grant of easement from Pacific Lumber Company (PALCO) to BLM along the Felt Springs Road, which connects to Humboldt County's Newburg Road. The established boundary provides a direct access to the northern portion of the Reserve from Humboldt County's Elk River Road. The acquisition legislation also required that future additions to the Reserve can only be made through federal legislative action.

State of California Conservation Easement and Memorandum of Understanding

For the State of California's interest in the acquisition of the Reserve, the state was granted a conservation easement on February 16, 1999, to ensure that all human activities within the Reserve will be consistent with the management goal established in the enabling federal legislation ("conserve and study the land, fish, wildlife, and forests occurring on such land, while providing public recreation opportunities and other management needs" [HR 2107, Section 501]). After the conservation easement was granted, a memorandum of understanding (MOU) was signed on May 5, 1999, between the designated federal and state management agencies—BLM and DFG—and the secretary of the California Resources Agency that directs both BLM and DFG to plan and manage the Reserve for its "fish and wildlife habitat and other ecological values as full cooperating partners."

Endangered Species Acts

The federal Endangered Species Act (ESA) provides a means for conserving ecosystems upon which endangered and threatened species depend, and it requires that federal agencies shall conserve endangered and threatened species (16 USC 1531[b,c]). The Reserve provides habitat for

- southern Oregon/northern California coasts coho salmon (*Oncorhynchus kisutch*), California coastal chinook salmon (*O. tshawytscha*) and northern California steelhead trout (*O. mykiss*), federally listed threatened species;
- marbled murrelet (*Brachyramphus marmoratus*), a federally listed threatened species and state-listed endangered species;
- northern spotted owl (Strix occidentalis caurina), a federally listed threatened species; and
- bald eagle (*Haliaeetus leucocephalus*), a federally listed threatened species.

Approval of the Reserve management plan is considered a major federal action that the managing agency has determined may affect these species; therefore, a consultation under Section 7 of ESA, must be completed (40 CFR 402).

The Reserve is designated as critical habitat for the marbled murrelet, coho salmon, and chinook salmon. Critical habitat is defined in ESA as a specific area within the geographical area occupied by the species that provides the physical and biological features essential to the conservation of the species. These lands may require special management consideration (USC 3[5][A]). Federal agencies, such as BLM, are required to consult with USFWS (for terrestrial or nonanadromous fish species) or NMFS (for anadromous fish species) if any actions they fund, authorize, or carry out could result in the destruction or adverse modification of critical habitat.

DFG is the management authority for the California Endangered Species Act (CESA). Species listed under CESA that find habitat at the Reserve include the marbled murrelet, as previously noted. Because DFG is also the lead agency for the state for development of this plan, it will conduct an internal consultation process to ensure that proposed elements of this plan will not disturb or adversely modify the critical habitat of the marbled murrelet.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (16 USC 703–711) prohibits the take of any migratory bird that crosses international boundaries. *Take* is defined as an action or attempt to "pursue, hunt, shoot, capture, collect, or kill a bird/species" and extends to any part of such a bird, its nest, or eggs. This act applies to all persons in the United States, including federal and state agencies. To help implement the act, Executive Order 13186 (January 11, 2001) requires that any project with federal involvement address impacts of federal actions on migratory birds. The order also requires that BLM develop an MOU with USFWS embodying protocols to avoid and minimize adverse impacts on migratory bird resources when the agency undertakes an action and to restore and enhance habitat of migratory birds, as practicable. Of the approximately 900 migratory birds occurring in the United States, 122 have been selected as species of management concern at a national level and 77 occur in the Reserve. Species that are confirmed to nest in the coastal redwood forest habitats of the Reserve include hermit warbler, Vaux's swift, Swainson's thrush, Pacific slope flycatcher, olive-sided flycatcher, northern spotted owl, and Allen's hummingbird (Roush pers. comm.).

The Antiquities Act of 1906 and National Historic Preservation Act

The Antiquities Act of 1906 provides protection of cultural resources on federal lands and authorizes the president of the United States to designate National Monuments. The National Historic Preservation Act (NHPA) expands protection of historic and archaeological properties to include those of national, state, or local significance and directs federal agencies to consider effects of proposed actions on properties eligible for or included in the National Register of Historic Places. It also requires proactive management of historic resources.

Listing on the National Register of Historic Places is a means of recognizing the cultural values of a historical resource. Candidate sites are evaluated and, if certain criteria are met, nominated for inclusion on the register. For the Reserve, actual designation would be agreed on by the State of California Historic Preservation Officer after BLM submits the nomination. BLM would make the determination of suitability and complete the listing. For properties that are listed, cultural resource management plans must be prepared.

NEPA and **CEQA**

The Department of the Interior and BLM signed an MOU with the State of California identifying the DFG as the state lead agency. As a result, the land management plan will be assessed in a joint EIS/EIR that is consistent with NEPA and CEQA. The purpose of an EIS/EIR is to ensure that decision makers are aware of the environmental consequences of a reasonable range of alternative actions. In addition, CEQA places an affirmative requirement on DFG to ensure that policy established by this plan will prevent unnecessary environmental damage, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representative plant and animal communities.

Federal Land Policy and Management Act

The Federal Land Policy and Management Act (FLPMA) (43 USC 1701–1782) describes federal policy for all lands administered by BLM. This policy requires the BLM to manage these lands to

- employ the principles of multiple use and sustained yield, except that where a tract of land has been dedicated to specific uses according to other provisions of law (e.g., the Reserve), it be managed in accordance with such law:
- protect the quality of the scientific, scenic, ecological, environmental, archaeological, and historic values;
- preserve and protect certain public lands in their natural condition (considered as areas of critical environmental concern);
- consider the relative scarcity of the values involved and the availability of alternative means and sites for realizing those values;
- provide for outdoor recreation and human occupancy and use; and
- periodically and systematically inventory and project present and future uses through a landuse planning process coordinated with other federal and state planning processes.

Management Guidelines

Management guidelines applicable to the Reserve are found in BLM's planning regulations and in four adopted resource management plans for the region or for adjoining lands.

BLM Resource Management Planning Regulations

The BLM planning process is governed by regulations established pursuant to FLPMA (43 CFR 1600) that require a comprehensive planning approach. Planning requirements are extensive and include a resource-based means of determining desired outcomes and allowable uses or needed actions to achieve the desired outcomes. These regulations are embodied in Section 1601 of BLM's land-use planning manual and section H-1601-1 of BLM's land-use planning handbook (issued November 22, 2000) (USDI BLM 2000a). They include procedural requirements for

- conducting a scoping process to determine issues and concerns;
- assessing information;
- analyzing the management situation;
- formulating desired outcomes;
- identifying allowable uses and needed actions;
- maintaining consistency with federal, state, and local policies and programs;
- coordinating evaluations with those impact assessments required under NEPA; and
- providing opportunities for public comment and participation.

The regulations require that BLM establish visual resource management zones and recreation management zones, and consider special designations for lands within the Reserve, including Area of Critical Environmental Concern (ACEC) and Wild and Scenic River, as well as nominations of cultural properties to the National Register of Historic Places.

Arcata Resource Area Resource Management Plan

The Reserve is within the boundaries of the BLM Arcata Field Office in northwestern California. Management of BLM lands is addressed by an existing resource management plan for the area (USDI BLM 1995a). The plan describes conservation management for a system of late-successional forest reserves, designated as ACECs. The plan does not directly apply to the Reserve, but it provides guidance in managing late-successional forest reserves within the Arcata Field Office jurisdiction to maintain and enhance ecological integrity. Enhancement activities include stand density management of previously harvested forest stands to accelerate recovery of late-successional forest communities without programmed timber harvest and watershed restoration through control of runoff and sediment production.

Northwest Forest Plan

The Record of Decision (ROD) for the Supplemental EIS for the Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl (commonly referred to as the Northwest Forest Plan) (U.S. Forest Service and USDI

BLM 1994) amends the current land management plan for the Arcata Resource Area. An amendment to the Northwest Forest Plan in 2001 specifically exempts the Reserve from requirements of the ROD (U.S. Forest Service and USDI BLM 2001).

Several standards and guidelines of the Northwest Forest Plan are relevant to the Reserve and will be adopted in this plan. They include the Aquatic Conservation Strategy and the guidelines for managing designated *Survey-and-Manage species*. These guidelines are adopted for the Reserve because they are directed at maintenance of ecological integrity in Pacific Northwest ecosystems, and they have been developed with the best available science, reviewed by the public, and approved by the Secretaries of the Interior and Agriculture.

Threatened or Endangered Species Recovery Plans

Recovery plans, authorized under the ESA (16 USC 1533), describe goals and objectives and provide direction necessary to aid species recovery, so that species might be removed from the threatened or endangered lists. A recovery plan adopted by USFWS for the marbled murrelet is available. Recovery plans for the listed fish species are currently being developed by NMFS.

Northern Spotted Owl

The Northwest Forest Plan provides the federal contribution to the recovery of the northern spotted owl. Accordingly, the plan for the Reserve should be consistent with the Northwest Forest Plan, providing equal or higher level protection for northern spotted owl and its habitat.

Marbled Murrelet

The Reserve is in the Siskiyou-Coast Range recovery zone (Zone 4) that is identified for the marbled murrelet (U. S. Fish and Wildlife Service 1997). The importance of nesting habitat in the Reserve was recognized by USFWS when the lands were owned by PALCO. Maintenance of suitable habitat is considered critical to avoid widening the gap in the distribution of the species between Humboldt County and central California (San Mateo County). Recovery of the species requires short-term actions to stop the species' rapid population decline and long-term actions to cultivate mature forest habitat. Management actions in Zone 4, which includes the Reserve, should focus on preventing the loss of occupied nesting habitat, minimizing the loss of unoccupied nesting habitat, and decreasing the time required for the development of new suitable habitat. Additionally, development of or modification to recreation facilities near marbled murrelet habitat should be evaluated to minimize disturbance and reduce the attraction of corvids (crows and jays) that might prey on murrelets.

Pacific Lumber Company's Habitat Conservation Plan

As a part of the Headwaters transaction, PALCO agreed to manage the remainder of its lands under a Habitat Conservation Plan (HCP), pursuant to provisions of the ESA. The established HCP applies to PALCO's lands adjacent to the Reserve but not to the Reserve itself (PALCO 1999). The requirements for the conservation of species that apply to PALCO's lands provide management guidelines that may be applicable to the Reserve as well. Relevant restrictions have been embodied in the "Species Management" section of Chapters 4. In addition, the monitoring element of the management plan for the Reserve should be coordinated with the monitoring

requirement of the HCP, to the benefit of BLM, DFG, and PALCO. Some of the protocols established in the HCP require monitoring of undisturbed ecosystems within the Reserve.

National Landscape Conservation System

The Reserve is a unit of the National Landscape Conservation System (NLCS). BLM created the NLCS in 2000 to place more emphasis on the conservation of specific intact western landscapes. Units in this system must be managed consistently with their underlying authority, which is HR 2107 for the Reserve. Each unit will have its own land-use plan established. Multiple-use activities are appropriate as directed by the authorizing legislation or executive order or as determined through a management plan; however, efforts are to be made to locate major recreation or interpretive facilities in gateway communities. Visitor contact and information facilities should be located outside of these units where appropriate. Roads and trails are appropriate when needed for a specific management purpose or to access some destination or development.

Planning Issues

A planning issue is a point of concern over resource management activities or land use that may be resolved or addressed in alternative ways. The decisions made by this plan are intended to resolve issues that arise from public input and resource monitoring and to implement federal and state statutory, regulatory, and policy mandates.

A public scoping process for preparation of the management plan and related environmental impact assessment was conducted from May 18, 2000 to August 18, 2000. Public and agency input was solicited through three public meetings (in Eureka, San Francisco, and Sacramento), use of a web site offering information and electronic comment input, establishment of dedicated telephone lines for information requests and comment input, and provisions for submission of written comments by mail. A summary of the comments received was compiled (Jones & Stokes 2000).

Issues to Be Addressed

Major issues identified include

- means of balancing preservation of old-growth ecosystems and threatened and endangered species that occupy them with public recreation access, considering the extent of trail access to or within old-growth groves that may be appropriate, and the appropriate types of trail use (i.e., walking, hiking, biking, and equestrian);
- management of traffic impacts to local residents along the two county roads providing public access to the Reserve;
- appropriate level of watershed restoration via road and log-landing decommissioning throughout the harvested portions of the Reserve to improve aquatic habitat conditions;

- appropriate level of forest restoration of harvested stands to accelerate recovery of old-growth characteristics; and
- access for the disabled and elderly to old-growth forest.

Issues Dismissed

Some of the issues identified by the public during the scoping process are not appropriate matters to be addressed in the management plan. These include the following issues.

- Acquisition of additional lands. BLM and DFG have concluded that the legislation authorizing Reserve acquisition intends that the management plan address management of the acquired lands consistent with existing land ownership.
- **Development of alternative or supplemental access routes.** BLM and DFG have concluded that the legislation authorizing the Reserve intends that the plan address management of access along the two existing access routes that were acquired in the acquisition transaction.
- **Development of a regional trail system.** The planning process will not involve design of a regional trail system involving other lands not included in the acquisition.

Planning Criteria

Planning criteria are the ground rules that guide the development of the plan and the planning alternatives. They are based on standards prescribed by applicable laws and regulations; agency guidance; coordination with the public; coordination with other federal, state, and local agencies and Indian tribes; and professional judgement. Planning criteria include

- the extent of analyses needed to support planning decisions,
- the range of alternatives needed to explore means to balance preservation and utilization needs and interests, and
- underlying planning assumptions.

Extent of Analysis

The plan will be formulated in response to the Congressional requirement for preparation of a long-term management plan for the newly acquired Reserve. The analyses needed for formulating the plan and assessing management effects requires that information be compiled in the realms of

- topography, stream network, and existing road system;
- geology and soils;
- water quality and sources of sediment delivery to streams;
- vegetation types and seral stages (ecological communities formed in ecological succession);
- fire and timber harvest histories;

- fisheries and extent of anadromy;
- wildlife occurrences and habitat requirements;
- cultural resources;
- emerging recreation use, recreation needs, and recreation opportunities; and
- research and monitoring needs.

Such information has been compiled by several means. Before and after public acquisition of the Reserve, several studies were conducted that provide part of the foundation for this plan and for interim management actions before the plan is adopted. These studies, to date, are listed below.

- Vegetation mapping and classification of the Reserve delineating plant associations and seral stages. Mapping was compiled through extensive ground surveys of vegetation polygons derived from detailed aerial photographic analysis. Stand types were identified and new stand descriptions were developed from 59 field plots. Ten plant associations were identified in mature and old-growth stands. Harvested lands were subdivided into 13 seral stages. The study results were entered into a geographical information systems (GIS) layer. (Jimerson and Jones 2000)
- Surveys of occurrences of marbled murrelet and northern spotted owls. Known northern spotted owl sites were surveyed by BLM in 2000 according to USFWS-approved protocol. Suitable marbled murrelet habitat was surveyed according to approved protocol by Redwood Sciences Laboratory and PALCO from 1991–1997. Survey results were entered into GIS layers and analyzed in Ralph et al. (1997).
- Surveys of the range of anadromy in streams draining the Reserve. These surveys, obtained from PALCO with minor modifications by local professionals and field checks by BLM and Humboldt State University staff, established the range of coho salmon and steelhead in the Salmon Creek and Elk River watersheds within the Reserve and on adjacent lands.
- Surveys of Survey-and-Manage species as defined by the Northwest Forest Plan. Surveys of Survey-and-Manage lichen and fungi were conducted using field plots (McFarland and Largent 2000). Localized survey information for Survey-and-Manage wildlife has been collected through predisturbance surveys at watershed restoration sites.
 - aquatic herptofauna—systematic sampling of all aquatic habitats in the Reserve was conducted to determine the presence and distribution of aquatic reptiles and amphibians. A report is expected in spring 2002.
 - aquatic macroinvertebrates—systematic sampling of all aquatic habitats in the Reserve was conducted to determine the presence and distribution of aquatic macroinvertebrates. Species identification in BLM's National Aquatic Monitoring Center is ongoing. A report is expected in spring 2002.
- Inventory of invasive, nonnative plants in the Reserve. Aerial photograph interpretation was used in conjunction with extensive ground surveys to map these plants at 1:24,000 and enter the mapping into a GIS layer.
- Watershed restoration plans for major portions of the Reserve. These documents include identification of all recognizable current and future sediment sources from roads within the Salmon Creek watershed, a plan and cost estimate for topographic restoration of the Headwaters Old-Growth Road, and an erosion inventory of several roads within the Elkhead Springs unit (PWA 2000a, 2000b). These plans, in conjunction with an approved

management plan and EIS/EIR, will contain the elements of watershed analysis required by the Northwest Forest Plan.

- A cost estimate for road decommissioning throughout the Reserve. The study includes review of the Pacific Watershed Associates 2000 erosion site inventories; a sample inventory of former logging roads in the lower Little South Fork Elk River and Elkhead Springs areas; development of average unit costs for two levels of restoration (hydrologic stabilization and full recontour) for each subwatershed in the Reserve; and development of a GIS layer showing the locations of inventoried roads and landings. (PWA 2001)
- An inventory of recreation use and recreation use attitudes. This study consisted of two parts. The first part is the result of a recreation survey conducted at the Elk River Trailhead in 2000. This study assessed frequency and intensity of use and attitudes toward use of the Reserve. The second part is a mail-out survey assessing attitudes of prospective users. (Humboldt State University Academic Foundation 2000, Humboldt State University Academic Foundation 2001)
- A cultural resource inventory of the Reserve. Pursuant to Section 110 of the NHPA, a cultural resources survey of the Reserve was initiated by BLM in 2000 and conducted by Humboldt State University Foundation (HSUF) under a cooperative agreement. The survey consisted of a formal records search, archival research, oral history interviews, a systematic archaeological field survey, formal recording of sites, mapping and photo-documenting discovered resources, developing a GIS cultural resources layer, conducting preliminary site-significance assessments, developing management recommendations, and preparing a report (Humboldt State University Academic Foundation 2001).

In addition to these sources of information, the following planning analyses have been conducted by BLM staff and their planning consultants:

- compilation of a detailed geologic map of the Reserve;
- assessment of the fire history of the Reserve;
- compilation of timber harvest history of the Reserve;
- evaluation of the effects of density management of forest species on the growth and development of second-growth stands;
- evaluation of potential trail routes in the Reserve, based on terrain characteristics;
- assessment of regional recreational needs and opportunities, by recreation type;
- evaluation of the experience of shared trail use among hikers, bicyclists, and equestrians;
- assessment of disturbance factors for marbled murrelets and northern spotted owls;
- analysis of effects of human activities on the attraction of scavenger bird species (i.e., corvids);
- analysis of effects of horse presence and horse waste products on spread of pathogens or nonnative plants; and
- review of recent experience of the recreational fee demonstration program for federal lands and the state park fees program.

The studies and analyses noted above provide a sound basis for formulation of the management plan and evaluation of planning alternatives as required by NEPA and CEQA and BLM's planning guidelines.

Range of Alternatives

The range of alternatives must accommodate the range of reasonable management strategies that could resolve the identified public issues and management concerns for management of the Reserve. These issues and concerns were discussed in the preceding section.

All of the alternatives considered in detail must be consistent with the overriding purpose for which the Reserve was created—the protection and restoration of old-growth and aquatic ecosystems. The need for this focus was described in the "Existing Planning Direction" section above. Consistent with the identified issues and concerns and the overriding purpose of the Reserve, alternatives for Reserve management must be formulated for

- intensity of watershed restoration, ranging from no restoration, in addition to that previously approved through 2002, to full stabilization and recontouring to natural topography of all sites contributing, or likely to contribute, sediment to the Reserve's streams;
- intensity of forest restoration, ranging from no forest restoration and complete reliance upon natural recovery of harvested stands, to moderately intense tree density management to nurture more rapid recovery of old-growth characteristics;
- availability of the southern access to the public, ranging from no access to individual automobile access at visitors' discretion, and including the interim alternative of guided access;
- extent of trail access throughout the Reserve, ranging from limiting public access to riparian corridors away from old-growth groves, to extensive passage through old-growth groves;
- nature of trail use, ranging from no use by bicyclists and equestrians to extensive use where trail conditions are appropriate, support facilities can reasonably be provided, and user conflicts can be minimized;
- potential special-area designations for some or all of the Reserve, including Area of Critical Environmental Concern, Research Natural Area, Wild and Scenic River System, and State of California Ecological Reserve; and
- use of access fees, ranging from no fee to a universal fee or an in-lieu donation of labor to help maintain the Reserve.

Within the ranges noted above, intermediate alternatives must also be formulated to provide potential means for balancing competing needs and interests.

Planning Assumptions

Several assumptions underlie the planning process; they are listed below. The basis for some of these assumptions was previously described; others are set forth here to illuminate intent in formulating elements of the plan.

- The plan will be consistent with the various existing authorities described in the "Existing Direction for Land-Use Planning and Management" section at the beginning of this chapter.
- The plan will be based on the information, analysis, and range of alternatives described above.

Planning Framework

- The Reserve will be primarily managed to protect and help recover populations of threatened and endangered species, with primary focus on marbled murrelet, northern spotted owl, coho salmon, chinook salmon, and steelhead, which are known to inhabit the Reserve. The Reserve will be managed to be available to protect and help recover any additional threatened or endangered species of old-growth ecosystems that may become listed in the future.
- The plan will promote a program of scientific research and resource monitoring for the Reserve, consistent with the preservation purpose for which the Reserve was created and to expand the current knowledge of the Reserve's resources.
- Recreational activities allowed in the Reserve will be those that foster education and interpretation of the Reserve's unique biological resources, maintain ecological integrity, and can be supported with minimal necessary facilities.
- The extent of the Reserve and access routes to the Reserve have been firmly established by Congress. No new access routes to the Reserve or land addition to the Reserve will be considered in plan formulation or recommended in the management direction established by the plan.
- A regional trail system will not be developed as a part of this plan.
- Public motorized vehicle use will not be allowed in the Reserve.
- Fire management in the Reserve will be conducted consistent with the unique old-growth values of the Reserve, and fuel treatment and fire suppression strategies will differ between old-growth forests and second-growth, recovering stands.
- Evaluations for inclusion in the Wild and Scenic River System, or designation as a State of California Ecological Reserve, will be conducted as part of plan formulation, and recommendations for such designations may be part of the management direction established by the plan.